



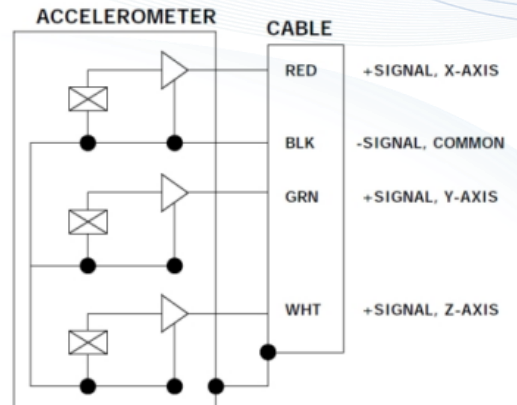
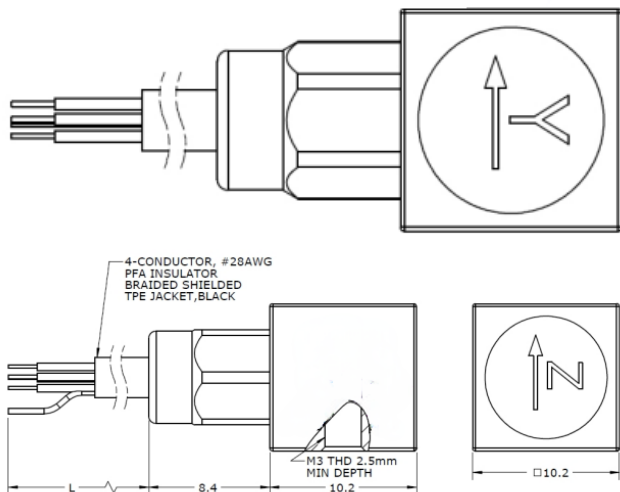
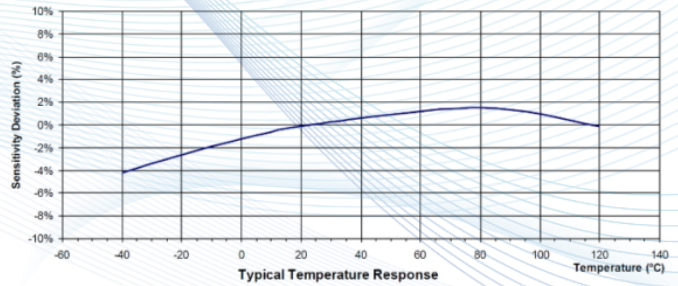
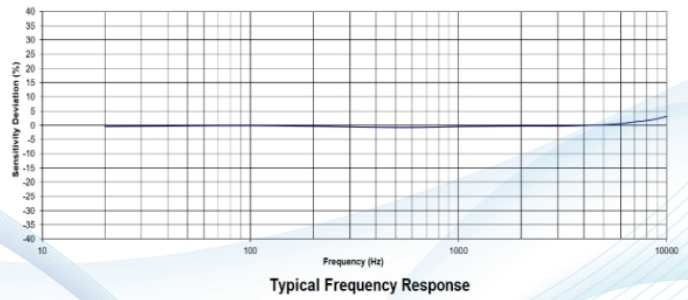
M74AT is an IEPE triaxial accelerometer designed for under-water applications. The accelerometer uses shear piezo electrical element which provides a wide operating frequency range. The IEPE sensor combines outstanding crystals and low noise integral microelectronics to achieve very low sensitivity variation over the operating temperature range, compared to other sensing element designs. The shear element technology also ensures high immunity to base strain errors. The accelerometer uses a welded titanium construction for low mass and integral cable assembly for under water operation. Excellent frequency response, both amplitude and phase, provide the user with a triaxial accelerometer ideally suited for structural and component testing, drop tests and hydraulic dynamic laboratory work. The miniature cube size of this accelerometer enables the test engineer or technician to measure the accelerations of three orthogonal axes of vibration simultaneously on lightweight structures. All variations provide reliable measurements and long-term stability.

## Features :

- Waterproof design
- Tri-axial measurement
- Miniature cube
- Adhesive or stud mounting
- Hermetic seal
- Annular shear mode
- Shock duration

## Application :

- Hydraulic dynamic
- Shock testing
- Satellite testing
- Modal analysis
- Aircraft testing



## Specification:

| Dynamic performance              | Unit  |             |             |           |             |             |             |
|----------------------------------|-------|-------------|-------------|-----------|-------------|-------------|-------------|
| Measurement Range                | g     | 50          | 100         | 200       | 500         | 1000        | 2000        |
| Sensitivity $\pm 15\%$           | mV/g  | 100         | 50          | 25        | -           | -           | -           |
| Sensitivity $\pm 10\%$           | mV/g  | -           | -           | -         | 10          | 5           | 2.5         |
| Frequency Range $\pm 5\%$        | Hz    | 1 ~ 10000   | 0.5 ~ 10000 | 2 ~ 10000 | 1 ~ 10000   | 1 ~ 10000   | 1 ~ 10000   |
| Frequency Range $\pm 3\text{dB}$ | Hz    | 0.5 ~ 15000 | 0.3 ~ 15000 | 1 ~ 15000 | 0.5 ~ 15000 | 0.5 ~ 15000 | 0.5 ~ 15000 |
| Resonant Frequency               | kHz   | 42          |             |           |             |             |             |
| Transverse Sensitivity           | %     | <5          |             |           |             |             |             |
| Non-Linearity                    | % FSO | $\pm 1$     |             |           |             |             |             |
| Shock Limit                      | g     | 5000        |             |           |             |             |             |

### Environmental parameters

|                                      |      |           |
|--------------------------------------|------|-----------|
| Temperature response<br>-55 ~ +125°C | %/°C | $\pm 10$  |
| Operating and Storage Temperature    | °C   | -55 ~ 125 |
| Bias Voltage (Room Temp.)            | Vdc  | 8 ~ 12    |
| Bias Voltage (-50 ~ 125) °C          | Vdc  | 6 ~ 13    |

### Electrical characteristics

|                           |            |         |
|---------------------------|------------|---------|
| Output Impedance          | $\Omega$   | < 100   |
| Full Scale Output Voltage | V          | $\pm 5$ |
| Insulation Resistance     | M $\Omega$ | > 100   |
| Supply Voltage            | Vdc        | 18 ~ 30 |
| Supply Current            | mA         | 2 ~ 10  |

### Physical properties

|                          |                     |          |
|--------------------------|---------------------|----------|
| Weight (Excluding Cable) | Grams               | 4.3      |
| Mounting torque          | lb-in (N-m)         | 16 (1.8) |
| Sensing Element          | Piezo ceramic       |          |
| Housing Material         | Titanium alloy      |          |
| Humidity                 | Hermetically sealed |          |
| Output Methods           | IEPE output         |          |

### Accessories

| Accessories |                                    | Availability |
|-------------|------------------------------------|--------------|
| HS013       | M3X8.0 cup point set screw         | Included     |
| AM003       | 3 channels IEPE signal conditioner | Optional     |
| AM004       | Portable vibration analyzer        | Optional     |
| AM005       | 8 channels data acquisition system | Optional     |

## Ordering information:

| M74AS  | GGGG | ZZZ |
|--|------|-----|
| Range<br>0050=50g<br>0100=100g<br>0200=200g<br>0500=500g<br>1000=1000g<br>2000=2000g |      |     |
| A=IEPE output<br>E=IEPE output with TEDS   |      |     |

E.G:

**M74AS-50**

Model M74AS, 0050, Connector, No Options

**M74AS-50A**

Model M74AS, 0050, Connector, IEPE

The data contained in this document is intended for the use of technical trainers only. The customer's technical department is responsible for assessing the suitability of the product for the intended application and the completeness of the product information given in this document in relation to such application. For further information on products, technology, terms and conditions of delivery and prices, please contact our nearest office ([www.senstechxyz.com](http://www.senstechxyz.com)).

中国大陆  
西安鑫源宇通电子科技有限公司  
陕西省西安市高新区锦业路70号航天恒宇园区1号厂房一层南  
Tel: 400-780-9688  
[sales@senstechxyz.com](mailto:sales@senstechxyz.com)

中国香港  
深大实业有限公司  
香港新界沙田安平街6号新贸易中心B座13楼06室  
Tel: +86 17792099916  
[info@caltropinstruments.com](mailto:info@caltropinstruments.com)

新加坡  
深大实业有限公司  
香港新界沙田安平街6号新贸易中心B座13楼06室  
Tel: +86 17792099919  
[info@senstechxyz.com](mailto:info@senstechxyz.com)



西安鑫源宇通电子科技有限公司 | 400-780-9688  
鑫源宇通——专业的传感和系统解决方案供应商

[www.senstechxyz.com](http://www.senstechxyz.com)